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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,579

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Gilles Cavallucci

71247-0041

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EXAMINER

AKANBI, ISIAKA O

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,579	Applicant(s) CAVALLUCCI ET AL.	
	Examiner ISIAKA O. AKANBI	Art Unit 2886	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-14 and 17-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-14 and 17-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 February 2008 has been entered. Claims 3-4, 15 and 16 are cancelled. Claims 29-43 have been added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-14 and 17- 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Cavallucci (2004/0246105 A1).

Regarding claims 1, 2, 13 and 14, Cavallucci discloses an optical detection method/device for determining the position of an object in a particular detection area of a surface (**figs. 3 and 4**), comprising

a preliminary (i.e. period before penetrating/placing a finger or a writing tool or stylus in an area) step of disposing in the vicinity of said detection area (**figs. 3 and 4: 30 or 31**) and on the same side thereof relative to the object at least four elements (**figs. 3 and 4: 1s, 22s, Ls and Ps**) including at least two emitters (**1s or L1 and L2**) of light and at least two receivers (**22s or (P1, P2 and P3)**) of light adapted to cover the detection area, each emitter being adapted to emit light (**fig. 4: 46**) in such a way that it does not hit said surface in the detection area, said emitters (**1s or L1 and L2**) and receivers (**22s or (P1, P2 and P3)**) being disposed in an alternating and regular arrangement (**pars. 0054, 0062**), the method further comprises:

- a step during which one of said receiver (**22s or (P1, P2 and P3)**) measures the quantity of light reflected by the object when the object is illuminated by one of said emitter for at least two different emitter - receiver pairs (**[par. 0066]**),

a step of calculating/storing by processor means (**fig. 2: 18 and 20**)(**[par. 0072]**) at least two characteristic values (**coordinate values**), from said measured values, wherein, as emitters and receivers are disposed in the alternating and regular arrangement, a characteristic value is calculated for each emitter by averaging (**weighting= (Statistics A factor assigned to a number in a computation, as in determining an average, to make the number's effect on the computation reflect its importance)**) the values measured by the receivers (**P1 to P3**) on each side of said emitter when only said emitter is turned on,

and a step of determining at least one position of the object by directly reading a table indexed (**weighting table**) by said at least two characteristic values, the content of

said table being predetermined (**i.e. by weighting the signals by coefficients of "zero" or of "unity"**) and set before said measurement step (**fig. 5**)([pars. 0045, 0066-0068]).

As to claims 5 and 17, Cavallucci further discloses, the processor/computer (**fig. 2: 20**) means calculate a characteristic value (**i.e. coordinate values**) for each emitter (**1s or L1 and L2**) by calculating a function of the values measured by at least three receivers (**22s or (P1, P2 and P3)**) when only that emitter is turned on, the coefficients of this affine function being a function of the distance between each receiver and that emitter (**fig. 5**)([pars. 0018-0023, 0028, 0045, 0066-0068]).

As to claims 6, 18, 29 and 35, Cavallucci also discloses a processor means (**fig. 2: 20**) that is capable of repeating said measurement step for each of said emitter (**1s or L1 and L2**) and receiver pairs (**22s or (P1, P2 and P3)**) until a stable/location quantity of reflected light is measured/determined (**fig. 5**)([pars. 0061-0062 and 0068]).

As to claims 7, 19, 30 and 36, Cavallucci discloses the limitation wherein non-linearity data processing (**relating to a device whose behavior is described by a set of nonlinear equations**) are performed to determine data items by the network (processor/computer) (**pars. 0028-0035 and 0048**), and thus meets the limitation wherein said predetermined table is obtained by a polynomial regression method from a number of preliminary measurements effected under the same conditions as apply to said measurement step.

As to claims 8, 9, 20, 21, 31, 32, 37 and 38, Cavallucci further discloses a surface (i.e. screen) that is substantially plane, and wherein, during said preliminary

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step, there are disposed in a single line emitters (**1s or L1 and L2**) and receivers (**22s or (P1, P2 and P3)**) of light having an emission axis, respectively a reception axis, substantially parallel to said particular detection area; and wherein said detection area is rectangular (**figs. 3 and 4: 30 and 31**) and the emitters and receivers are disposed in the vicinity of only one side of said rectangular area (**figs. 3 and 4**)([par. 0061]).

As to claims 10-11, 22-23, 27, 28, 33, 34, 40, 42 and 43, Cavallucci also discloses the limitations wherein the light emitted by the light emitters is ordinary non-coherent light; wherein the wavelength of the light emitted is in one of the following ranges of wavelengths: UV, visible, infrared; and using detectors/sensor to detect the displacement/position of an object (**figs. 3 and 4**)([pars. 0024-0028 and 0055]).

As to claims 12 and 24, Cavallucci further discloses a set of elementary areas (**figs. 3 and 4: 30 and 31**) each associated with a given function (i.e. of detecting/indicating penetration of the area) so that any position of the object in an elementary area activates the function associated with that elementary area (**see abstract**)([pars. 0045, 0061]).

As to claims 25, 26 and 41, Cavallucci also discloses the limitations wherein said particular area corresponds to an input area (**data input terminal**) and each of the elementary areas corresponds to a key (**keyboards**)(**see abstract**)([pars. 0002 and 0015]).

Response to Arguments

Applicant's arguments with respect to claims 1-2, 5-14 and 17-28 rejection have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on (571) 272-2287. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi

May 24, 2008

/TARIFUR R CHOWDHURY/

Supervisory Patent Examiner, Art Unit 2886